Considerations for First Time Marathoners
and others dissatisfied with their previous marathon

This article addresses the special challenges faced by first-time marathoners. It assumes they have completed a marathon training program; under the tutelage of a coach, or followed a prescribed on-line or book program. And, it assumes they have completed at least two 20+ mile long runs.

First, we need to cover the three key principles which govern how fast everyone can run <u>any</u> road race.

Running Economy, this is measured as vVO2max. It is your velocity [pace] at VO2max; VO2max is a measure of the maximum rate of oxygen you can utilize for creating energy. For example, an elite running a 28min 10K literally uses 1/2 the oxygen than does a 56min runner. Typically, most runners run 3Ks at about 95%, 10Ks at 92%, 10milers at 85% and marathons at about 65% of their vVO2max. Ultra-marathons get down to 40%, or so. Interval & Hill workouts are the most efficient way to improve your vVO2max. For intervals, a pace just above your vVO2max speed is optimal.

vVO2max determines your <u>capacity</u> to finish road races within a specific time. Obviously, it is not the sole determinate, otherwise you could run marathons at your 10K pace. However, if you improve your vVO2max by 10%, then all your road-race times will improve by about the same amount. Obviously, this assumes a balanced training program for the specific distance. It is a myth that some people are genetically predisposed for short road races and some for marathons. All world-class marathoners are also world-class 10Kers. Sprinters are genetically in a different class.

Central Governor, this is the term Dr. Tim Noakes coined to describe the primal part of our brain which is responsible for maintaining our Homeostasis when we run [see, http://en.wikipedia.org/wiki/Homeostasis]. A simple example: We can not hold our breath and commit suicide. Nor can we run a marathon at our 10K pace. Our <u>Proprioception controls our sense of fatigue</u>; is not [I repeat NOT] due to cardiovascular limit and lactic acid, etc. [see: http://en.wikipedia.org/wiki/Proprioception]. A major factor in performance training is really that of teaching our Central Governer is is safe for us to run a marathon. Your Central Governer's job is to protect you and it is stuborn and very hard to convince that running a long time at near your vVO2max pace is safe to do. [As an aside, there is some fasinating research. For example, our Central Governor will not let us run when our core temperature exceeds 104deg. Nor will it let us run when we are dehydrated, contrary to popular myth.]

Fat Metabolism, you have two primary sources of stored fuel, glycogen [sugar] and fat. Metabolizing fat requires considerably more time to retrieve from storage and convert to usable energy fuel. Our Central Governors do a terrific job in determining the proper ratio of glycogen/fat to use for the intended distance we plan to run. All out sprints at nearly 100% glycogen and our marathon pace is roughly 50% of each.

The combined affect of these 3 factors depends on the race distance.   Running Economy is by far the predominate factor for 5K races; essentially you can run at about 95% of your maximum vVO2max. Most trained runners can run 3miles without feeling particularly fatigued. At typical marathon times, our Central Governors and Fat Metabolism become the major factors.

With these fundamentals in mind, next we'll discuss how to effectively deal with them.

I suggest your goal may be to finish very satisfied with your time. This requires a careful balance between not running so fast that you "hit the wall" and are forced to walk near the end and running so slow and conservative you know you could have done better. Achieving this balance for first marathoners is not simple. Experienced marathoners can use past experience and tools such as described in my " Using the WAVA Tables "

If you have only run a couple of 20mi long runs, you need to realize that 26miles is **30%** longer and farther. You certainly are not going to run 30% farther at the same pace as your 20mi training run. [Incidentally, the 20mi marathon training run dates back at least 100 years. It worked for elites in the 1940s and up to the 1970s because they were finishing in the 2:30/2:2:45 range. At a sub 6:00 pace, they only needed to "gut it out" for another 30 minutes or so. Even more importantly, they were all very experienced 10K and 10mile racers, that were use to dealing with perceived fatigue.] Today's typical first-time marathoner aims for roughly 4:00hrs, [a 9:00min pace]. Thus, at 20miles, they still have another **hour** and **6** miles to run. Ask yourself if you felt able to keep going for another hour after your last 20mi training run.

If you have run at least two 26+ training runs, no matter how slow, you can reliably use the same time. In fact, you can safely go a little faster because of the "racing effect". We can all run a race faster than we can a training run.

So, how can you deal with a 20mi max training run situation? You can wing it; but, this has the risk that you'll be forced to walk some. Walking costs about 8min/mile; if you walk/jog 3 or 4 miles, you'll <u>lose 24 to 32 minutes</u>, plus.

Thus, your strategy should be based on minimizing the probability that you'll be forced to walk.

Here is my suggestion for a race plan. The most conservative method is based on your average long, training run pace.

Your target pace should be **20 to 30 sec/mile slower** [e.g., 8:20min/mi instead of 8:00]. **Wow!** But relax. The plan calls for you to run at this pace for the **first 1/2** of the race. Then take a careful assessment of how you are feeling. If you are **not** laboring and feeling frisky, pick up the pace a bit and carry on. Continue to reassess and adjust your pace accordingly to the end. **Anytime you find yourself "laboring",** back off the pace dramatically [even if it means jogging]. **Do not attempt to "gut it out"** because your Central Governor has taken over, you will only be able to run for about 200m. Jogging is faster than walking.

Before you get concerned, consider this. The worst thing that can happen is that you'll find yourself "laboring" at the mid point and thus have to maintain your 20-30 sec/mi slower pace to the end. Worst case, you'll "lose" about 8 to 13 minutes, **total**. Most likely, you'll be able to pick up the pace for the final half and thus only lose about 4 to 7 minutes. This is a good trade-off. The 6 minutes, or so, is good insurance you won't have to walk some miles and lose about 8 minutes per mile.

At mile 20, or so, pick someone ahead of you and "reel-them-in"; continue doing this to the finish line. At mile 23 or 24 assess how you feel. If you are still going strong and easy, put the hammer down and go for it. The feeling of passing other runners near the end is absolutely fantastic.

IMPORTANT, test your selected pace. Run 10.0 miles slightly faster than your intended race pace on a flat, few turns course. If you can't run it very easily, then it's obvious you won't be able to run 2 1/2 times farther on race day. Reconsider your intended pace. Remember the rule: **It's better to run slower all the way and not risk having to walk.**

Tapering before the big day: Several research programs found about 50% of marathoners started their race with significant muscle cell damage, primarily due to a lack of proper tapering. This is unnecessary and dumb, to say the least. So, how do you prevent this? By tapering the two weeks before. Keep this important point in mind: There is nothing you can do the last 2 or 3 weeks before a marathon to improve your time. However, there are many things you can do to ruin it; the principal one is running unnecessarily. Your last super long run [>10mi] should be at least 3 weeks before the big day. A 10mi, run at your intended marathon pace, two weeks before. The second week before: At the track, do a handful of mile repeats at your intended marathon pace. Basically, the last week before the marathon should be tapered. E.g., Sun 5mi easy; Mon off; Tue 3mi jog, maybe a few 60sec/30sec at no more than a 80% effort; Wed 2mi jog + 2 or 3 60sec/30sec; Walk Thur and Friday. Take off Sat.

Nutrition: Forgo the traditional pasta dinner the night before. There is virtually nothing in the meal that will help you run the next day. In fact, you'll be carrying the extra weight and your system will still be busy digesting it. Substitute ice cream and cookies, e.g., simple sugars. Your system will effectively use the sugar for running energy.

Race day morning: Eat some simple-sugar junk food. Cookies donuts, etc. Drink 1 or 2 pints of simple sports drink.

Be careful with Jell-packs and the like. We best absorb water and sugar when it is in a 7% solution. Plain water is not quite as good. Absorption becomes very poor when the concentration becomes 10-12%. It takes about 13oz of water to correct a typical Jell-pack concentration. Nothing but plain old simple sugars will help you run, that's a fact, forget the sales hype. Any perceived benefit from magic bars and the like is simply sales hype. Remember, we burn about 100 calories per mile when running. Typically, the magic potions have about 100 to 150 calories, which lasts for 1+ mile. However, some good research has shown performance can be improved by ingesting sugar in a 7% solution [Typical for most sport drinks] during marathons every hour or so. A neat trick is to carry some plain Lifesavers, not the sour type, with you. The tongue senses the sugar and signals the brain that help is on the way. This makes you feel better, but it's strictly mental.

Final Recommendations: Wear the same shoes, socks and clothing that you've used for your long runs. This is your only insurance you won't have chafing and other gear issues during your race. Use "Body-Glide" and not Vaseline [it washes off] on your toes, under arms, between thighs and any place you have ever had chafing previously.

During your marathon run concentrate on how smooth and easy you are running, and how great you'll feel crossing the finish ahead of your plan. Near the end, start "reeling-in" runners ahead of you; it will help to override your Central Governors attempt to stop you from doing this nonsense.

I suggested earlier that an ideal goal would be to finish very satisfied with your time. Follow this advice and you will, I guarantee it.

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35 Marathons; 4 Bostons, qualified at 3:05 age 50; 3d Age-Group USATF Masters National Marathon Championship, 2007, etc.